GEORGE P. COULTER
1713 Sansom St.,
Philadelphia, Pa.

MATHEWS GRAVITY CARRIERS AND AUTOMATIC ELEVATORS

DEVOTED TO
BRICK
CONVEYERS
EXCLUSIVELY

MAIN OFFICE AND FACTORY
ELLWOOD CITY
PENNA.

FOREWORD - - -

The handling of brick, concrete and cement blocks, hollow tile, drain tile, etc., by hand, wheelbarrows or trucks, is not only a slow method, but involves a waste of high priced labor.

The introduction of the *Mathews Gravity Brick Conveyer* years ago solved the brick makers most serious problem. It furnishes an inexpensive means by which clay, cement or concrete products may be moved, without power, from kilns direct into cars, or to stock piles. A study of the following pages will make clear many advantages of our method, all of which cannot fail to interest the practical brick man.

We emphasize the following points:

First—The conveyer is composed of portable units, making it flexible and easy to shift to any part of yard.

Second—The brick travel by their own weight, the force of gravity carrying them along the ball bearing rollers when set up on a slight down grade.

Third—There is no returning for a load; the brick travel in a continuous stream from kilns to cars just as fast as men can put them on and take them off.

Fourth—You can make up your loading crew of any kind of floating labor, even boys; our conveyer eliminates employment of experienced wheelers.

Fifth—Bad weather cannot interfere with car loading, as men are under cover at both ends of conveyer line.

Our list of sales includes large and small manufacturers located in every brick-making state of America. Repeat orders are constantly coming in, demonstrating beyond question the practical value of our system of brick handling.

MATHEWS GRAVITY CARRIER COMPANY
Ellwood City, Pennsylvania

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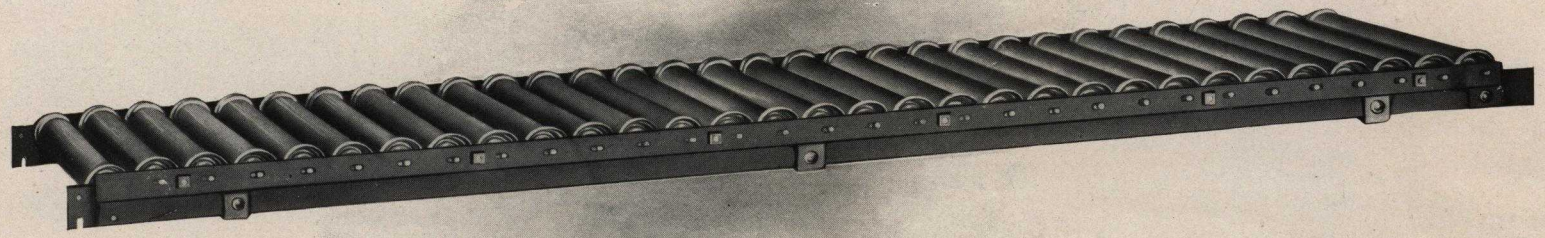
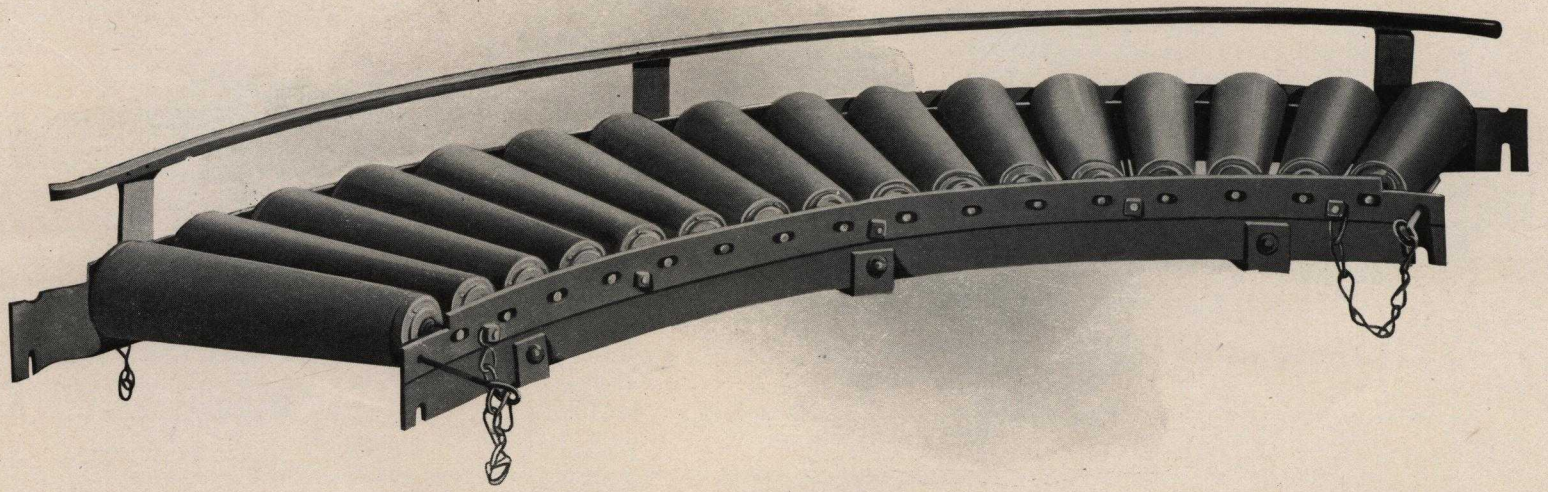
MATHEWS GRAVITY BRICK CONVEYERS



STANDARD EIGHT FOOT BRICK CONVEY ERUNIT

Made also in four ft. units. Standard eight ft. unit sconsist of thirty-one steel. ball-bearing rollers, assembled in rigid, strong bar iron frames, well bolted and braced, over which brick will travel any desired distance on a slight down grade.

MATHEWS GRAVITY BRICK CONVEYERS



STANDARD CURVE UNIT, BRICK CONVEYER

Constructed in same substantial manner as standard straight units, except that rollers are made of seasoned hard maple, kiln dried, and tapered, having an inside diameter of $2\frac{3}{16}$ inches and an outside diameter of $3\frac{1}{8}$ inches. Curves are reversible and provided with low outside guard rail to prevent brick from crowding off in making the turn.

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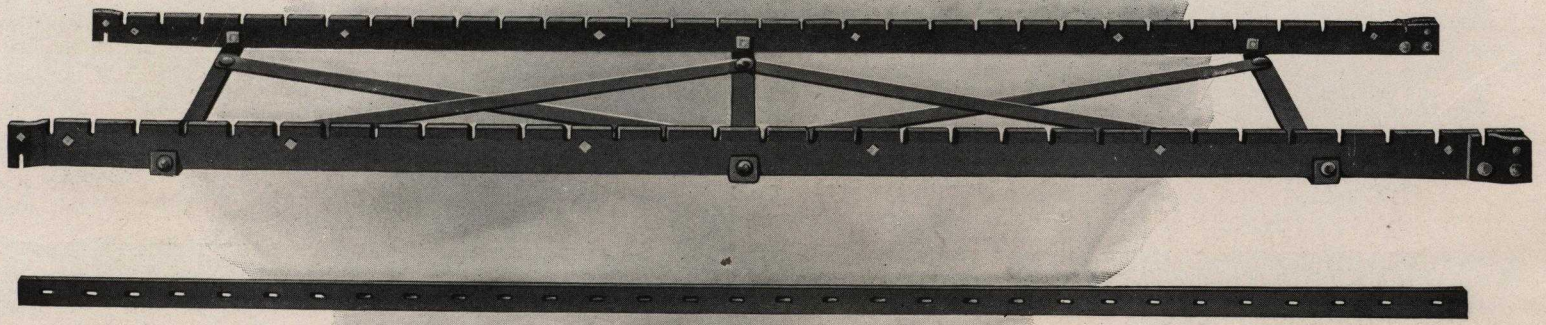

Realizing that roller units must stand up under unusually hard service, we have been particularly careful to construct the frame so as to secure the maximum strength, rigidity and resisting qualities.

The main roller support bars are of 20 to 30 point carbon, open hearth steel, and are connected transversely by heavy steel bars, securely bolted. Illustration also shows longitudinal braces securely riveted to cross bars.

The thirty-one rollers are assembled in the frame by placing the extremities of the full length axles in the grooves provided, each axle acting as an additional cross brace to the frame. The lock bars, one of which is shown above, are then bolted into position, one on each side of the frame, thus securing rigidity of rollers without use of troublesome bolts or nuts. Damaged rollers can be quickly removed and new ones inserted.

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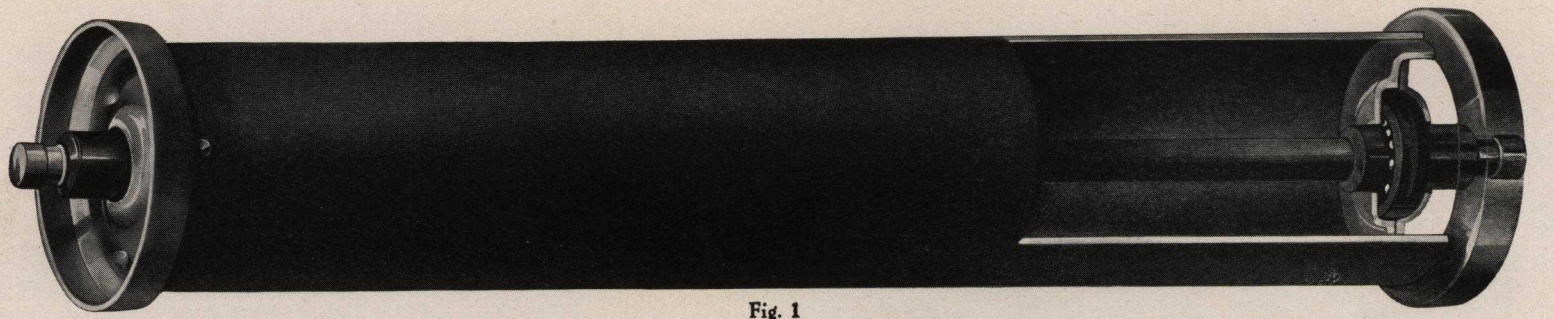

Fig. 1

Fig. 2

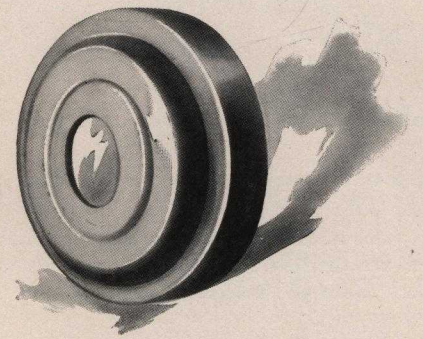

Fig. 3

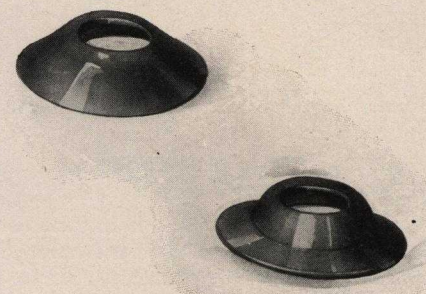

Fig. 4

Fig. 5

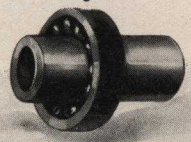

Fig. 6

Fig. 7

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MATHEWS GRAVITY BRICK CONVEYERS

Figure 1—Sectional view of Standard Brick Roller, made of cold drawn seamless steel tubing. Size 2 1/4 O. D. by 16 gauge. Rollers may be made any length desired.

Figure 2—Axle made of $\frac{7}{16}$ in. solid machine steel.

Figure 3—Retaining cap which fits inside of roller and extends 3/8 in. above the ends of roller to form the flange to prevent brick from crowding off the edge.

Figure 4—Showing first and last operation in forming outside retaining cap—formed from a single piece of metal.

Figure 5—Ball race; balls and cup assembled. Balls are 1/4 in. in diameter, high grade.

Figure 6—Ball cup drawn from .148 dead soft 4-pass stamping steel; case hardened.

Figure 7—Ball race, made on automatic machines from cold-rolled shafting, case hardened.

Loading brick from up-draft kiln into Gondola car. Boys handle the brick as well as men.
Easier—quicker—cheaper than any known method.

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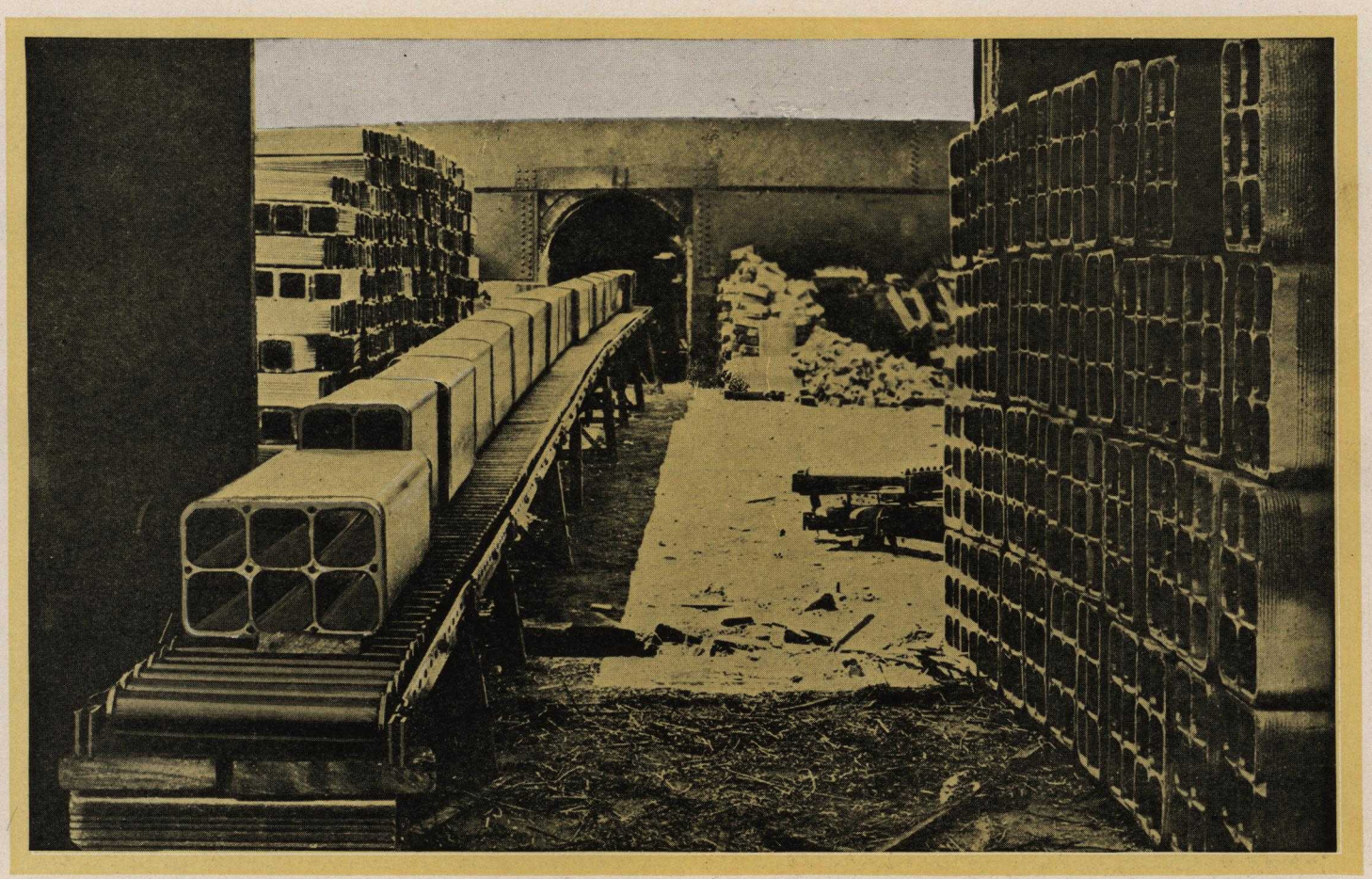
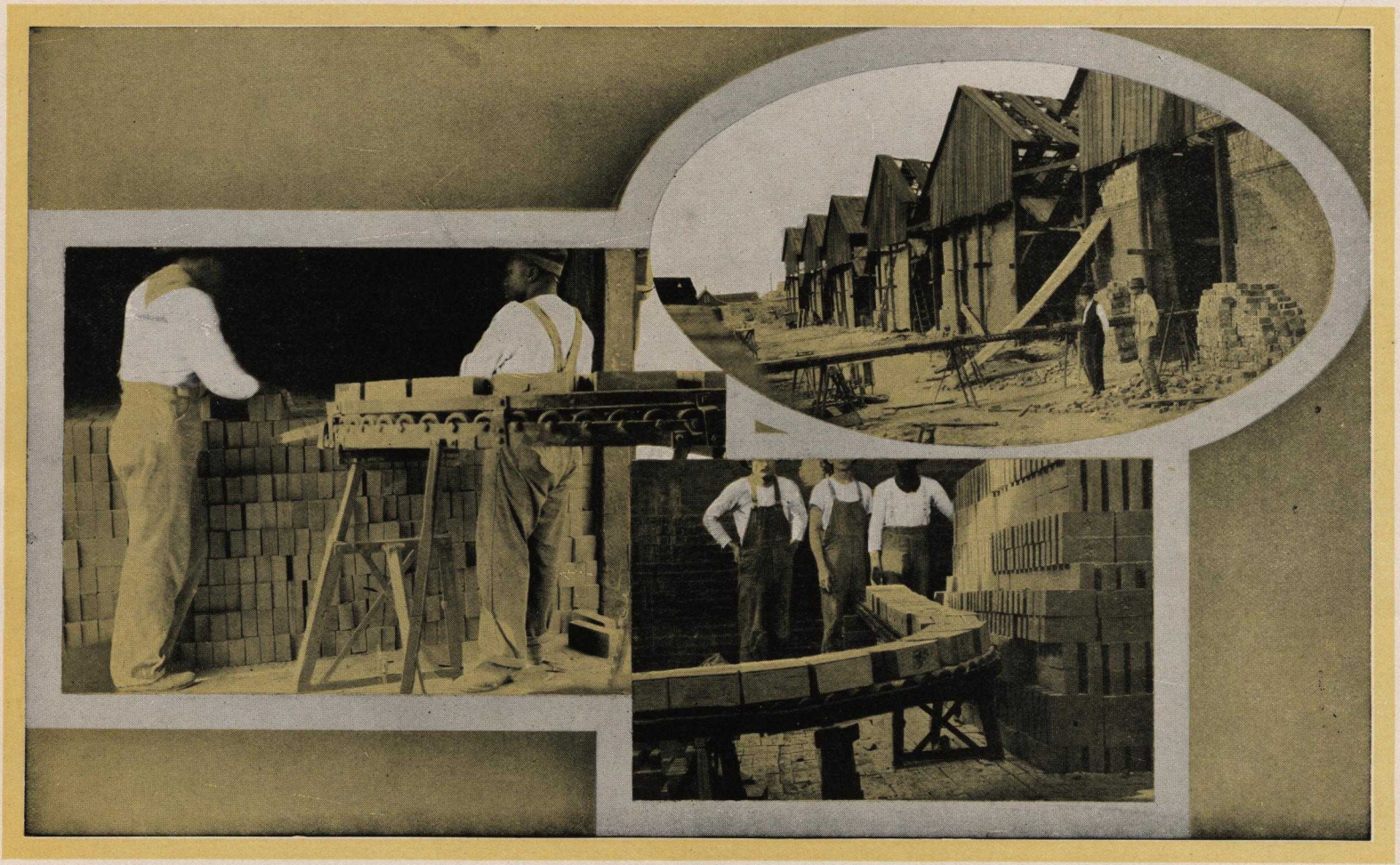


Conveying Six-Chamber Conduit on Mathews Gravity Fourteen-inch Brick Conveyer
From kiln to stock pile or cars without injury.



Upper right view shows battery of kilns with line of conveyer to cars. Lower right shows loading end in kiln, and left view shows unloading end in car. In this plant six men loaded as many brick as ten men did formerly with wheelbarrows.

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View showing car being loaded with "kiln run" brick from an up-draft kiln. When using the Conveyer for loading face brick, "Shader" stands midway of the Conveyer, checking the run and sorting out the brick that are "off shade." In six hours 30,000 brick passed the shader, 20,000 going into the car and 10,000 into the off-shade pile.

Unloading a kiln of burned brick. This picture illustrates the wonderful capacity of our Brick Conveyer, as it will be noted that it will carry all the brick loaded upon it by six men, taking them to any desired point without further attention, as they will not fall off or become damaged in transit.

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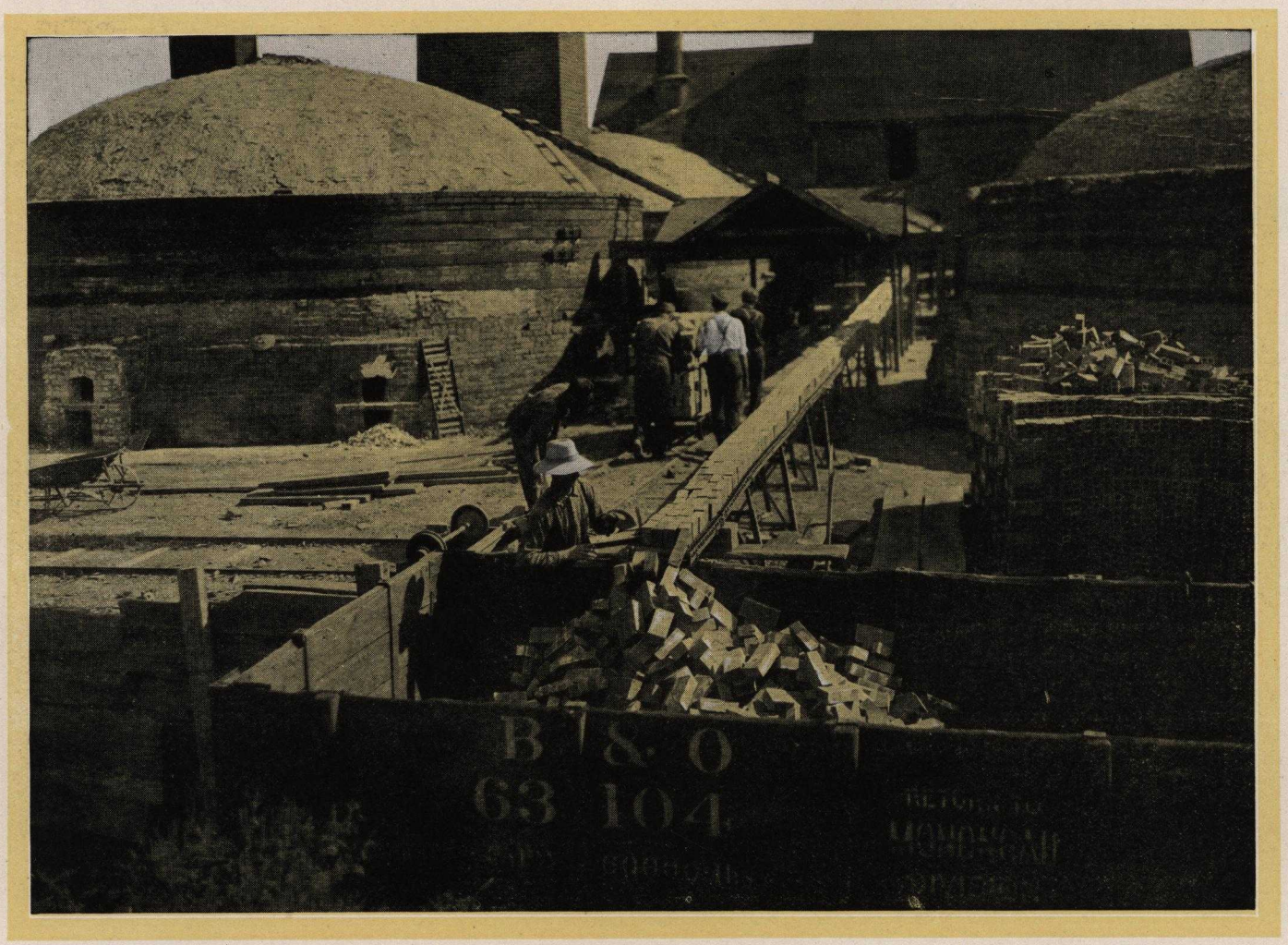
This Portable Automatic Elevator is very necessary where R. R. siding is not depressed. It is constructed of solid steel throughout and will last for years. It receives automatically from Gravity Conveyer at low point and discharges automatically at top to Gravity Conveyer. This is the only machine in the world that will automatically handle loose brick and keep them together to destination, and do it perfectly.



View shows car being loaded with common brick, illustrating how rapidly the work can be done by the use of the Mathews Gravity Brick Conveyer. One-third loading time and one-third labor expense are saved by this modern method of handling brick.

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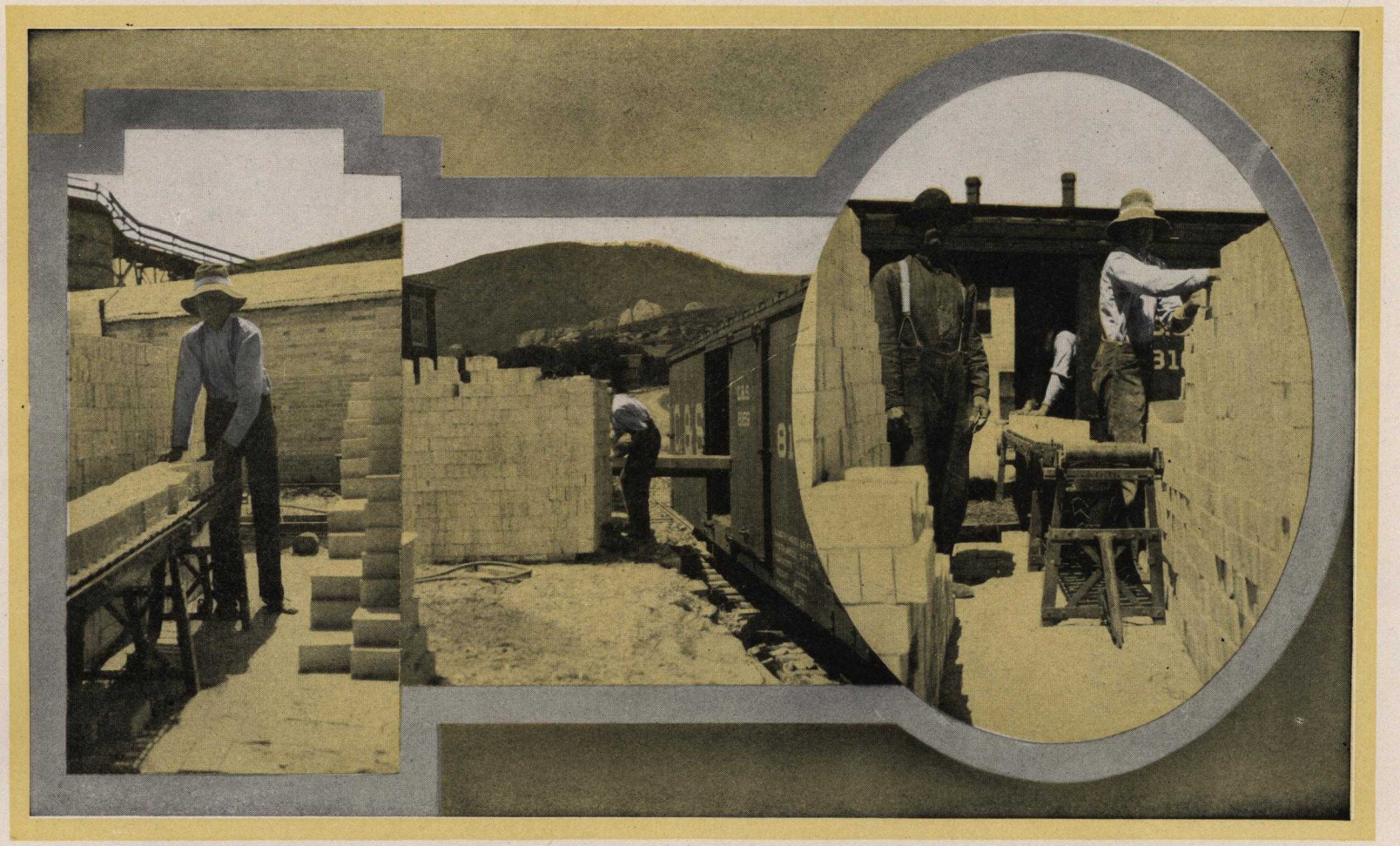
Illustrating our fourteen inch brick Conveyer loading cars from kilns a distance of about one hundred feet. This Company says that "men who could not load brick for us with wheelbarrows will load from twelve to fifteen thousand per day with the carrier."



Three views of Conveyer being used for loading cars with Sand-Lime Brick. Brick may be carried to either end of car with our reversible curve section. Conveyer saves time and labor even for short distances.

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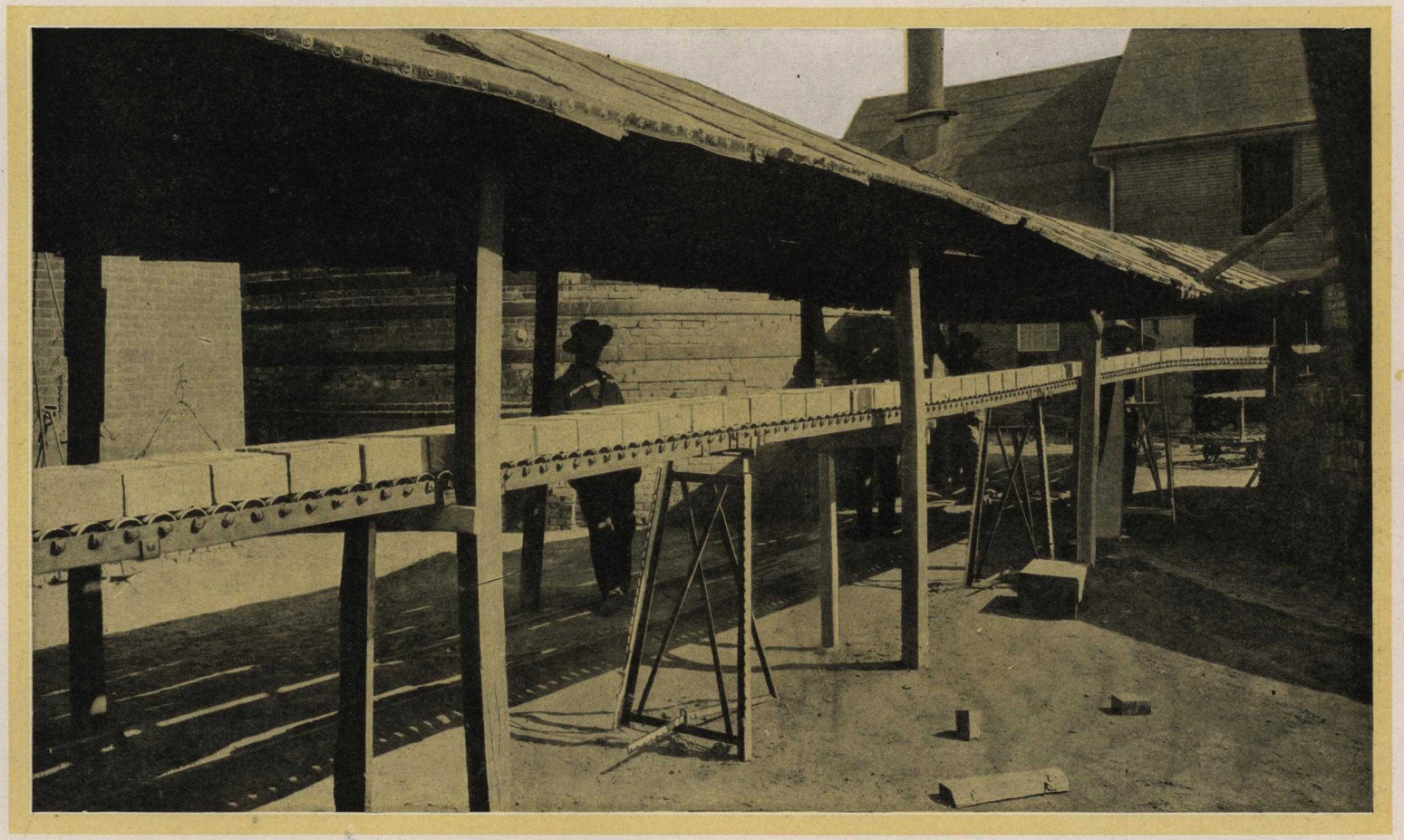

View showing line of Carrier from kiln to cars. Brick travel at uniform speed any distance without damage. The Company using this equipment writes that our Carrier has reduced their loading expense one-half over the old method of loading, besides enabling them to load more cars in a day than was possible under former conditions.

The above picture was taken at one of the plants of the Bessemer Limestone Company, Youngstown, Ohio, one of the largest manufacturers of paving blocks in the world. This Company has over eleven hundred feet of Mathews Gravity Conveyer, most all of which is in constant use for loading cars.

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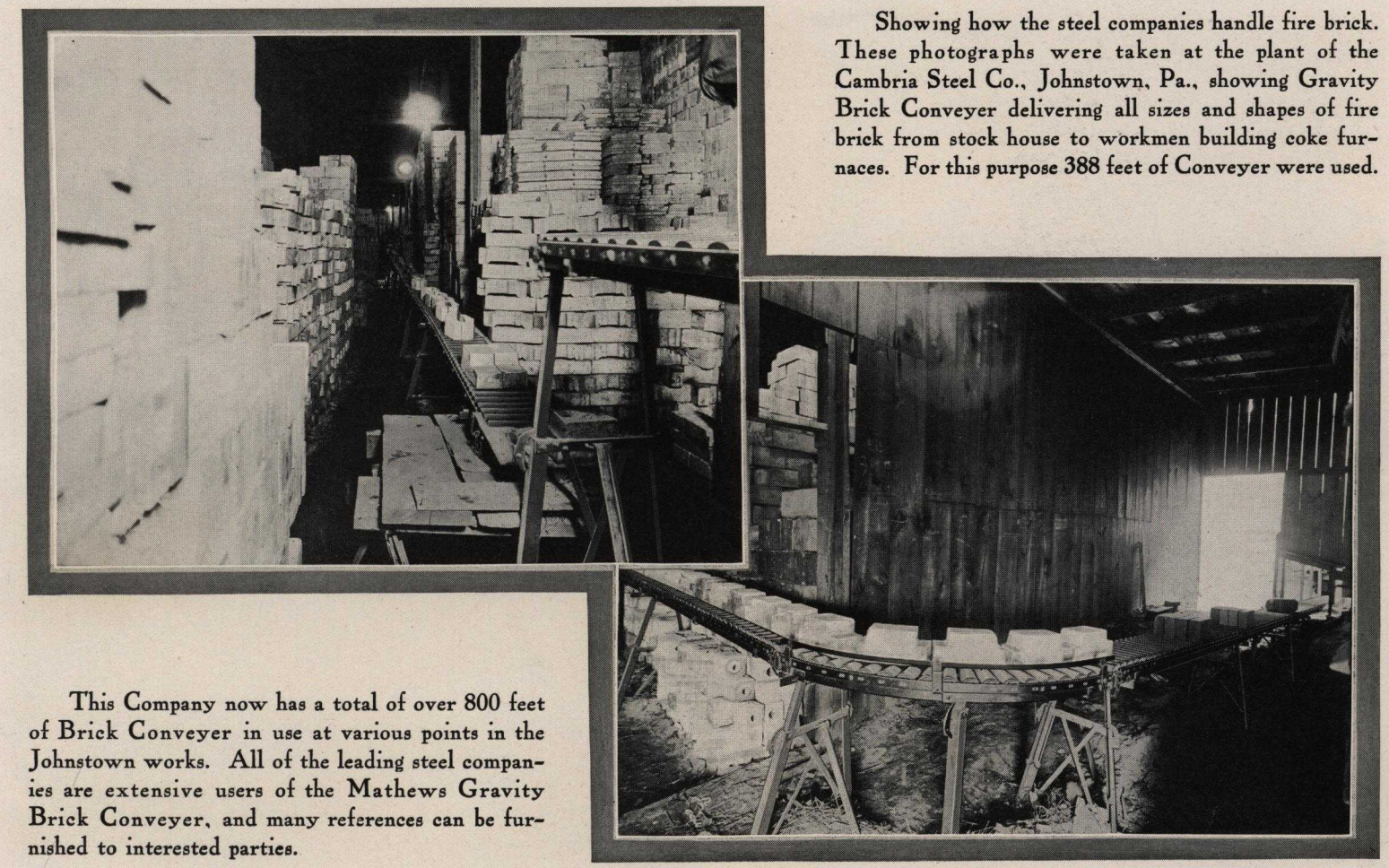

Showing how the steel companies handle fire brick. These photographs were taken at the plant of the Cambria Steel Co., Johnstown, Pa., showing Gravity Brick Conveyer delivering all sizes and shapes of fire brick from stock house to workmen building coke furnaces. For this purpose 388 feet of Conveyer were used.

This Company now has a total of over 800 feet of Brick Conveyer in use at various points in the Johnstown works. All of the leading steel companies are extensive users of the Mathews Gravity Brick Conveyer, and many references can be furnished to interested parties.

Nothing but a cyclone can stop your rush orders for brick if you are equipped with the Mathews Gravity Brick Conveyer. Above picture shows how the work can be carried on during a heavy thunder storm—with the workmen under cover—comfortable and dry—at both ends of the line.

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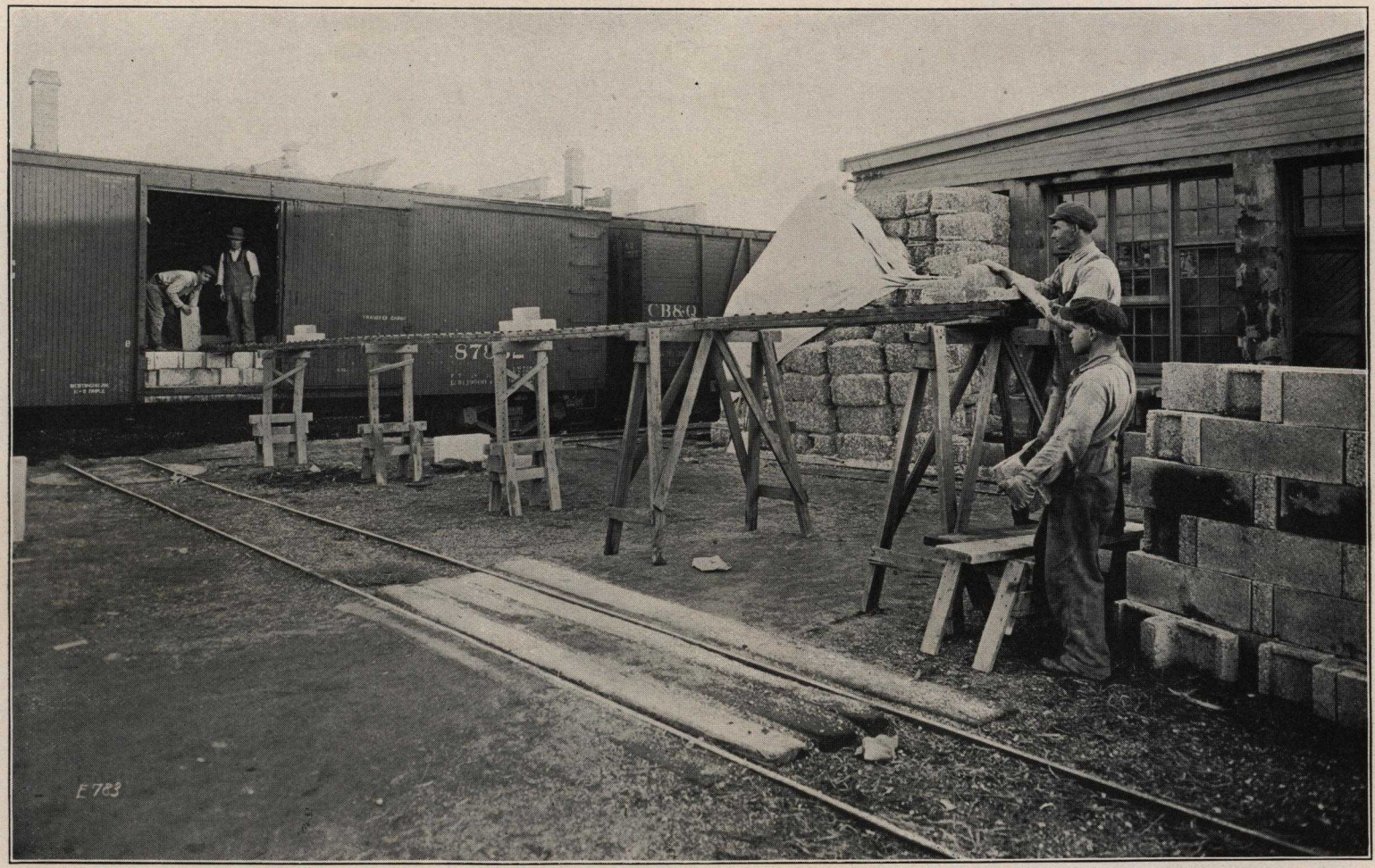
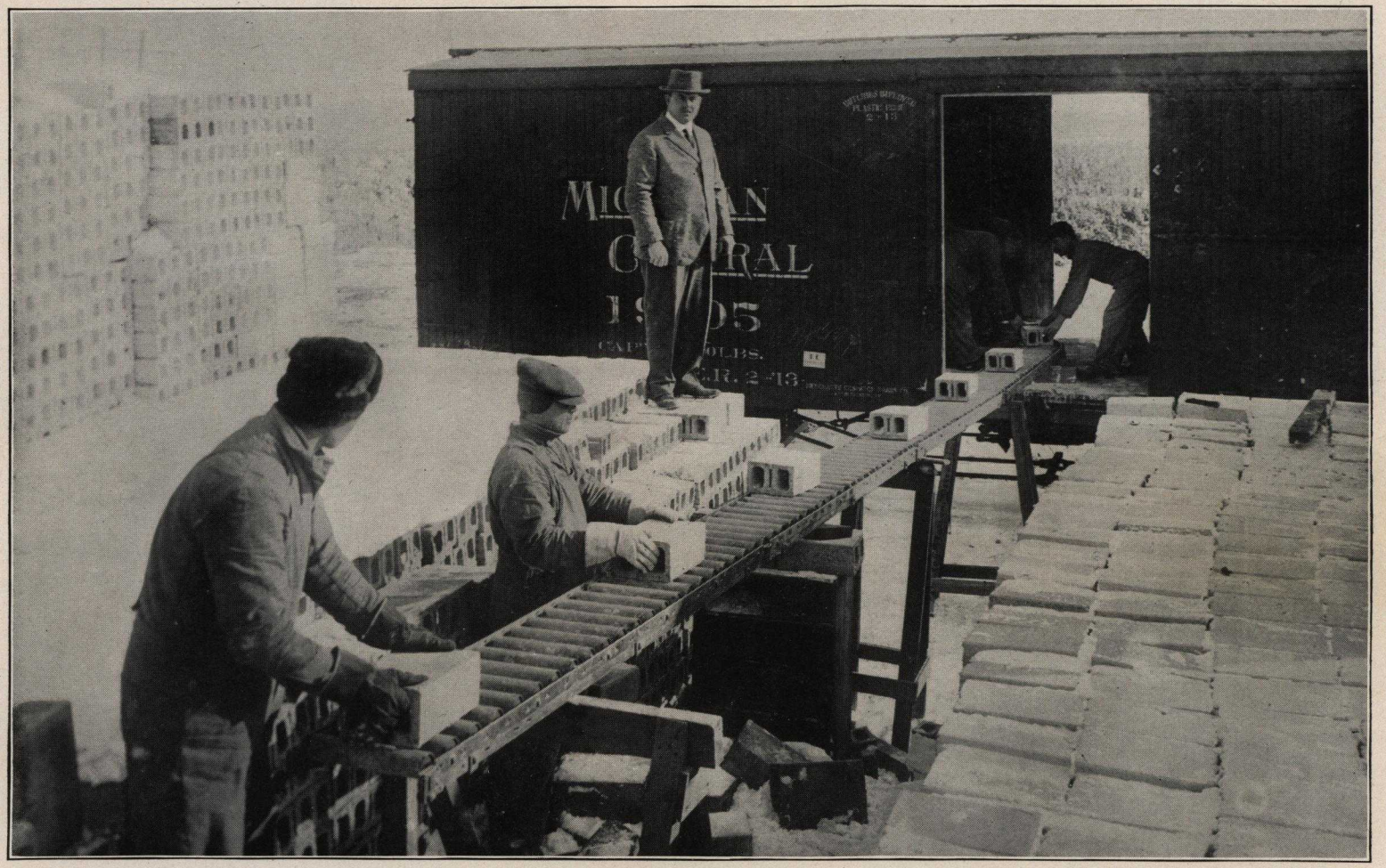


Illustrating how the Mathews Gravity Brick Conveyer lends itself to the conveyance of odd-shaped clay, concrete or cement products. Above view was taken at the plant of the Hydro-Stone Products Co., Clearing, Ill.



Illustrating the Mathews Gravity Brick Conveyer delivering hollow tile from stock piles direct into cars, in the yard of the Delta Brick & Tile Co., Detroit, Mich. Men are filling both ends of the car from opposite sides of carrier line.

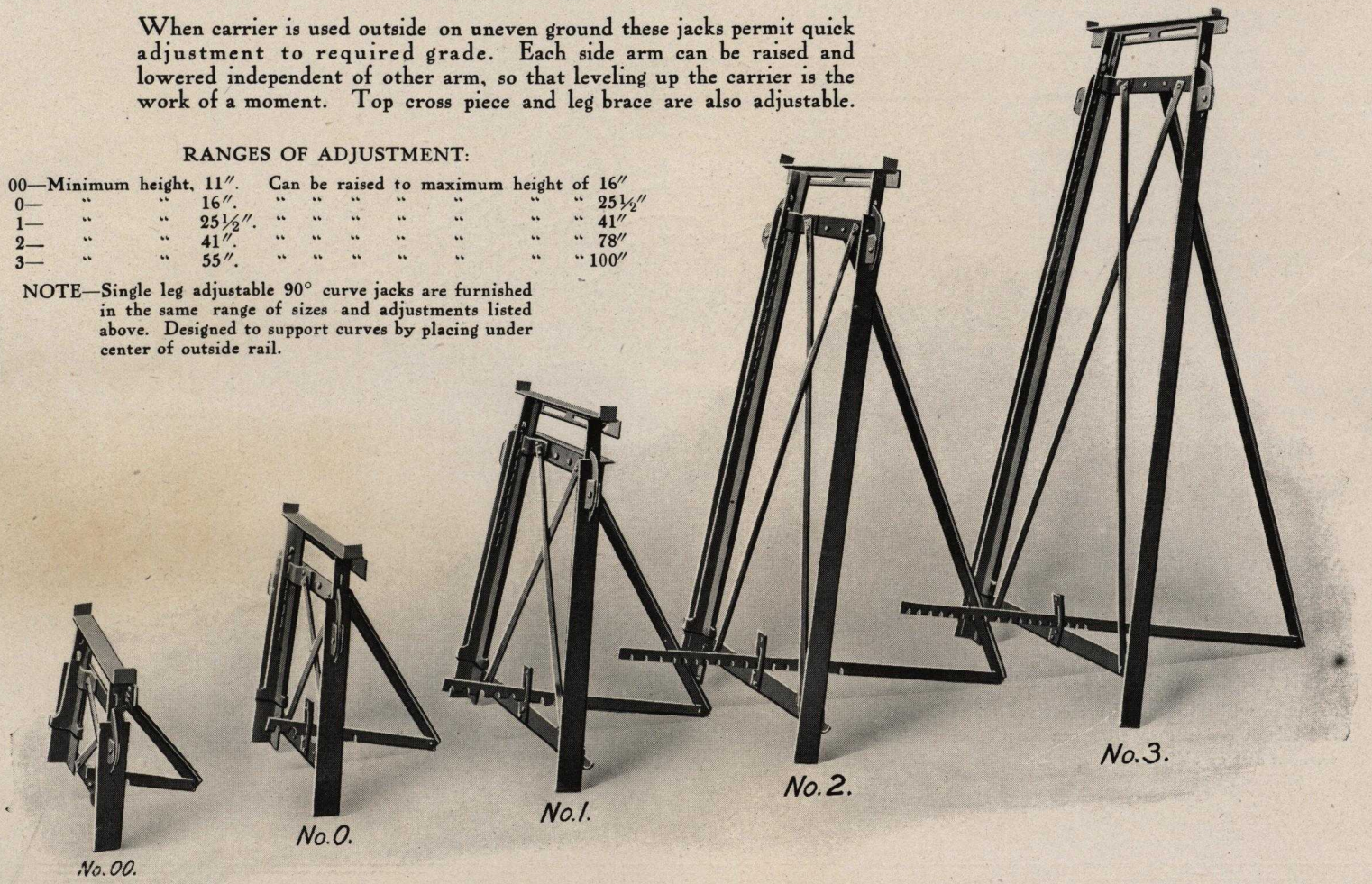
Adjustable Jacks for Supporting Mathews Portable Roller Conveyer Units

When carrier is used outside on uneven ground these jacks permit quick adjustment to required grade. Each side arm can be raised and lowered independent of other arm, so that leveling up the carrier is the work of a moment. Top cross piece and leg brace are also adjustable.

RANGES OF ADJUSTMENT:

No.	00—	Minimum height,	11″.	Can be raised to					maximum height of		16″
"	0—	"	16″.	"	"	"	"	"	"	"	25½″
"	1—	"	25½″.	"	"	"	"	"	"	"	41″
"	2—	"	41″.	"	"	"	"	"	"	"	78″
"	3—	"	55″.	"	"	"	"	"	"	"	100″

NOTE—Single leg adjustable 90° curve jacks are furnished in the same range of sizes and adjustments listed above. Designed to support curves by placing under center of outside rail.



BRANCH FACTORIES:

British Mathews, Ltd., London, England
Canadian Mathews Gravity Carrier Co., Ltd., Toronto, Canada

BRANCH OFFICES in all leading American cities.

Salesmen will visit any plant; analyze the requirements and submit estimate covering suitable Conveyer System, without cost or obligation.

Main Office and Factory:

ELLWOOD CITY, PENNA.

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